

7

Claims

1. Seat-belt tensioner comprising a belt retractor and a belt drive which can be coupled to a belt shaft thereof by means of a tensioner coupling, said tensioner coupling comprising of at least one coupling latch movably arranged between a release position and an engagement position, said coupling latch producing a load-transmitting connection between the belt shaft and belt drive when in its engagement position and moving forcibly controlled out of the engagement position and into the release position at the conclusion of the coupling movement, characterized in that an inertial mass (19) is mounted on the belt shaft (10), said inertial mass being rotationally arranged in relation to the belt shaft (10) and being rotationally displaced in the direction of winding when the belt drive (25) is released from the belt shaft (10), and that the coupling latch (14) is coupled to the inertial mass (19) in such a manner that the inertial mass (19), which runs behind and has a greater rotational speed than the belt shaft (10) at the end of the coupling step, drives the coupling latch (14) out of its engagement position.



8

- 2. Seat-belt tensioner according to claim 1, characterized in that the coupling latch (14), which is radially arranged to swing between the release position and engagement position, engages a radial cam (20) arranged in the inertial mass (19) using a pin (21) located at an axial distance from the coupling latch.
- 3. Seat-belt tensioner according to claim 2, characterized in that the radial cam (20) is arranged in the inertial mass (19) with such a shape that, after the release of the belt drive (25), the pin (21) of the coupling latch (14), this pin being located in the radial cam (20) and the coupling latch having been driven out of its engagement position, takes along and accelerates the inertial mass (19) in the direction of winding of the belt shaft (10), and that the pin (21) migrates into the radial cam (20) until reaching an end position when the rotational speed of the belt shaft (10) slows down, thereby radially swinging the coupling latch (14) from the engagement position into the release position.